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ABSTRACT

This report on reforming the undergraduate curriculum begins with a review of the development of curricular theory and an examination of both the current issues in the reform debate and the attendant roadblocks to achieving real curricular improvement. Section I outlines some curricular proposals that could conceivably serve as models for the future. Section II describes current innovative programs at 24 institutions of higher education. Section III provides an annotated bibliography of the literature on which this review is based. (AF)

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REVIEW 4

REFORMING UNDERGRADUATE CURRICULUM: PROBLEMS AND PROPOSALS

ERIC CLEARINGHOUSE ON HIGHER EDUCATION

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MARCH 1971

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PROBLEMS AND PROPOSALS

by

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FOREWORD

Undergraduate curricular reform has become a matter of increasing interest to educators in the last decade, as both student demands for relevance and knowledge have increased. In order to assist curricular committees attempting to determine current views on curricula, James Harvey, Research Associate at the Clearinghouse, has prepared this paper that includes a review of the practical difficulties involved in achieving reform, an outline of current proposals and actual curricula in operation on several campuses, and an annotated bibliography.

The fourth in a series of reviews on various aspects of higher education, this paper represents one of several Clearinghouse publications. Others include commissioned papers, bibliographies and compendia based on recent significant documents found both in and outside the ERIC collection. In addition, the current research literature of higher education is abstracted and indexed for publication in the U.S. Office of Education's monthly volume, *Research in Education*. Readers who wish to order ERIC documents cited in the bibliography should write to the ERIC Document Reproduction Service, Leasco Information Products Company, 4827 Rugby Avenue, Bethesda, Maryland 20014. When ordering, please specify the ERIC document (ED) number. Payment for microfiche (MF) or hard/photo copies (HC) must accompany orders of less than $10.00. All orders must be in writing.

Carl J. Lange, *Director*
ERIC Clearinghouse on Higher Education
March, 1971

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REVIEW

> One of the great indoor sports of American faculties is fiddling with the curriculum. The faculty can engage in interminable arguments during years of committee meetings about depth versus breadth. They can fight almost without end about whether education should be providing useful or liberal knowledge. They can write learned books and articles about the difficulties of integrating human knowledge at the time of a knowledge explosion. And of course the battle between general and special education is likely to go on until the end of time. Curricula are constantly being changed. New courses are introduced, new programs offered, new departments are created . . . .
>
> The harsh truth is that all this activity is generally a waste of time . . . .(9)*

The Hazen Foundation's melancholy assessment of undergraduate curriculum reform serves to underscore a traditional frustration of higher education: the recognized need to revise curricula and the consequent failure to bring it about.

This failure is not due to lack of trying. For years educators have seen new curricular proposals enthusiastically advanced and discussed. In fact, publications exhorting new approaches have appeared with great regularity since World War II; however, virtually no one has been satisfied with the outcome of all this activity.

A Carnegie Commission study released in January 1971 indicated that while 70 percent of the students polled agreed—with or without reservations—that most students at their school were satisfied with their education, 90 percent of these same students wished course work were more relevant to contemporary problems, and 80 percent thought more attention should be given to students' emotional growth.[24] Moreover, different groups of students tend to reject aspects of the curriculum that fail to satisfy their own special needs.[46] For example, so-called radicals, black students, women, and first-generation college students undoubtedly view the undergraduate curriculum from greatly different perspectives.

Recent literature on curriculum emphasizes that an acknowledged discontent has developed because previous efforts at revision have not gotten to the heart of the matter. In spite of the publicity heralding new approaches, the net result has meant little. "In many cases," write Dressel and DeLisle, "the minor changes . . . (amount) to no more than a reshuffling of credits, (and) can only be characterized as tinkering . . . ."[4] Concurring with the Hazen Foundation report, they "can imagine faculties spending many hours on these pointless decisions."

To gain a perspective on the problem, this review considers the development of curricular theory and examines both current issues in the reform debate and the attendant roadblocks to achieving real curricular improvement. Sections I and II outline some proposals for reform and present several novel curricula already being used by colleges and universities. Section III, an annotated bibliography, provides the literature on which the review is based.

While true curricular reform implies that all elements of the educational continuum somehow interrelate, this review considers only undergraduate education. Possible changes to high school, junior college, or graduate programs are not discussed. Also, the remarks for the most part are unrelated to preprofessional programs, which tend to be extremely prescribed—usually on the theory that undergraduate prerequisites must be met as a foundation for professional study. Although this argument is compelling, Mayhew believes the preprofessional programs need not be as rigid as they are at present.[46] Since evidence exists that in some cases professional courses merely "warm over" undergraduate work, and since experimental programs have successfully reduced introductory science materials for science students, credibility must be granted to Mayhew's viewpoint.*

Curricular Issues Yesterday and Today

Undergraduate curriculum underwent several major changes prior to 1900. In Spurr's words:[22]

> At the risk of enormous oversimplification, we may divide the evolution of the American baccalaureate into four stages: (1) the standardized classical curriculum, which prevailed from 1636 to perhaps 1750; (2) the introduction of modest components of science and modern studies from 1750 to the end of the Civil War 1865; (3) the heyday of the free elective system from 1865 to 1910; and (4) dual emphasis on general education and subject-matter specialization from 1910 to the present.

General education, or the common background that most institutions feel every student should possess, has been a major issue for curriculum reformers. In the 1920's, Columbia required all students to take Contemporary Civilization and Humanities courses, while in the 1930's Chicago developed the Great Books approach, adopted by St. John's College, Annapolis as a 4-year degree program.[41] After World War II, the concept of general education became more widespread and "core" programs or distribution requirements came into vogue.

Yet, general education courses have not been successful. Students view them as arbitrarily conceived, boring, and poorly taught. A 1968 survey at the University of Massachusetts found seniors willing to change seven out of eight of the core requirements.[30] Typically, most felt that

*Numbers in parentheses refer to bibliographic entries.

*See Pickar, Arnold D. and others, "Development of a Core-Course for College Science Majors Combining Material from Introductory Courses in Biology, Chemistry, and Physics. Final Report," Portland State College, Oregon, DHEW, Wash., D.C., Oct. '67. (51p. ED 021 759). Also final report of Phase II of this project, Feb., 1969, (29p. ED 032 237).

these requirements were superficial, adding little to their understanding of the subject, and would have preferred additional work in their major field. In line with this type of criticism, and the predominant interest of faculty members in their own departmental programs, the search for a satisfactory general education program lessened during the 1960's. In fact in 1967 Blackburn claimed the general education movement was dead.[8]

However, the remnants of the general education movement are very much alive. In place of specific course requirements, the typical general education program today takes the form of distribution requirements; that is, a set number of credits or courses selected from broad areas of knowledge, such as the humanities or the social sciences. Bell [41] thinks that substitution of distribution requirements for commonly prescribed courses demonstrates the failure of the older form of general education.

Today, to avoid requiring 2 years of work that the student doesn't want to study and the faculty doesn't want to teach, "modes of thought" or "ways of knowing" courses have been implemented. The advocates of this approach say the general survey course cannot possibly assimilate the new information resulting from the knowledge explosion. Today's student will have to face the promise of an even more complex 21st century. Rice states that, "Our task as educators . . . becomes one not simply of helping students know what is known but of helping them become learners themselves–autonomous, self-initiating, and self-propelling."[18] Henle agrees:

> It makes little difference whether we have 200 pages or 50 pages on electricity in our physics course. What is absolutely essential is that we teach people what they need to know in order to "read" physics. And note, this is not a problem that exists only in the sciences, though there it may be most striking; it exists in all areas of our culture. There are people who cannot "read" poetry, others who haven't the foggiest notion of how to "read" an abstract painting.[16]

The knowledge explosion that prompted these changes in education has also led to the creation of new disciplines. Dressel and DeLisle [4] suspect that the desire to give new disciplines "a place in the sun" may have motivated recent curricular experimentation as much as a desire to increase flexibility. Basically, new courses or requirements have been added to major programs, but the literature on curriculum reveals no substantial changes in major programs since the beginning of the century. Increasingly, within recent years integrative, problem-oriented courses have been proposed for senior students. Bell has advocated a "third tier" of courses in which integrative seminars would demonstrate to the student the applications of his discipline to a problem area.[41] Other educators also suggest such "capstone" courses and institutions such as Brown have adopted the idea.

The Failure of Curricular Reform

The literature on curriculum indicates, however, that the efforts made to reform curriculum have not produced results that satisfy many educators and students. It appears that lack of consensus about the purposes of undergraduate education coupled with the practical problems involved are responsible for this lack of success.

Conflicting Purposes

There are fundamental differences between the faculty and student body and differences within each group as to the purposes of education. The literature indicates that the goals of the more traditional faculty members and the students who support them generally dominate higher education. To most of these individuals colleges and universities exist to train an intellectual elite in a discipline. Fritz Machlup is straightforward in stating his belief that:

> Higher education is too high for the average intelligence, much too high for the average interest, and vastly too high for the average patience and perseverance of the people, here and anywhere; attempts to expose 30 or 50 percent of the people to higher education are completely useless.[15]

To Machlup, the increase in the number of people entering college has resulted in a decrease in depth in the curriculum. He feels that this trend should be reversed by restricting higher education to a small scholarly fraction of people capable of pursuing an education in depth; "broader, continuing education" should be provided for the majority.

Many students, and the reform-minded faculty members who support them, feel that this insistence upon depth ignores student needs. They maintain that insistence upon depth and disciplines makes higher education little more than a training ground for specialists; students unwilling to accept this pattern are ignored as not being academically oriented. Students and their supporters maintain that rather than expecting undergraduates to fit existing curricular patterns, the curriculum should meet the developmental interests of the students and fit the needs of the young adult. Sanford, therefore, claims that the primary aim of education should not be the "accumulation of knowledge or the development of specific skills" but "the development of students as individuals."[20] The curriculum in Sanford's view should attempt to go beyond developing only intellectual skills and should attempt to develop the entire personality of the undergraduate.

To Tussman, the problem reduces itself to the fact that "*Students* are not *scholars*."[39] Tussman is very much the traditionalist opting for a completely required humanistic program in general education and the retention of the major system. However, he makes what should be a self-evident point that is frequently overlooked by curricular developers–the needs of developing scholars differ from the needs of the developing young adult.

Mayhew substantially agrees that the curriculum should foster the developmental needs of the undergraduate, and anticipates opposition to the approach:

> Now it can be argued that the college is, after all, an institution of limited mission, and that it can only concern itself with knowledge and rationality. If so, colleges should then reject what so many of them claim–that they are interested in the development of the whole man.[46]

Practical Problems

There are, of course, many practical problems involved in curricular reform, beginning with the fact that thorough reform requires a massive effort on the part of the institution. One of the major practical problems stems from the dispute over purposes. The faculty's traditional insistence upon depth, that is, a discipline, has strengthened individual departments to the point where they can veto proposed innovations. Many commentators have noted that faculty disinterest in undergraduate students helped to destroy general education. As Axelrod [40] says: "except in a handful of institutions, instruction in *breadth* has been in the hands of the departments that carry responsibility for specialized curricula. On the whole this mode of organization has been ineffective . . . ." Blackburn [8] bluntly blamed faculty interest in specialization and disinterest in general education for the failure of general education to achieve its goals.

The departments at small colleges are not immune from the urge to specialize. At Concordia College, even when department meetings were held to discuss general education programs, "It seemed illuminating that all except two of these departments spent considerable time . . . defending their majors program, that in fact only two departments devoted their meetings with us to a consideration of their role in general education [34]." At Concordia, only one department spent more money per credit hour upon its general education program than upon its majors.

A third group, the administration, can also aggravate the problem between faculty and students. Katz [13] thinks that these three interest groups have difficulty communicating. The faculty member is generally interested in professional growth, the student in personal growth, and the administrator is concerned with such things as plant maintenance and public relations. The problems caused by lack of communication between these three groups can be formidable to the curriculum developer. Any cursory examination of attempts to revise institutional curriculum leaves the investigator stunned at the number of ways in which proposals can be undermined. At an institution where faculty members have been given administrative support in curricular review, proposals may be rejected in the Senate. Faculty approved suggestions can be destroyed by a balky chairman, dean, or president. Consultants' recommendations can be evaded or rejected entirely by either the faculty or the administration. In at least one instance, new curricular proposals have received the support of both the faculty and the administration only to be rejected by the Board of Trustees [49].

Another problem frequently mentioned in the literature is the tendency of institutions to imitate each other in curricular matters. Although the diversity of American education is often lauded, curricular diversity is rare indeed. The tendency is to follow the lead of a prestigious group of schools. Mayhew has been particularly concerned with this trend: [46]

> A small institution serving youth from a rural area . . . can serve students better than by requiring two years of a foreign language for graduation simply because other types of colleges do so . . . .
>
> A small Minnesota liberal arts college which attracts 80 percent of its students from Swedish-American farm families, for instance, might well base some of its course work on the values of that subculture. Similarly, certain New York City institutions might serve Jewish, Puerto Rican, or Irish cultures and traditions.

Beyond the power struggles within institutions and the institutional tendency to conform, certain operational factors which are not as readily recognizable also make curricular reform difficult. Axelrod identifies six structural elements in the typical college or university that act in the "curricular-instructional" process as a system.[40] He maintains that although educators attempt to isolate and modify each element individually, the system cannot be modified successfully without taking each of the six elements into consideration. Each element interacts with and affects the others; therefore, a drastic revision of one of the elements can be totally nullified by the unchanged status of the others.

Axelrod identifies the elements as:

- Content: the facts, principles, skills, abilities, attitudes and values the student is expected to master. This element is concerned with the knowledge to be included, order of presentation, and level of complexity involved.
- Schedule: the time-space and logistical elements of education. The concern is with who and how many people get together with whom, how often, where, and for how long.
- Certification: the periodic evaluation of the degree-seeker and his evaluation as having completed the requirements listed under content. Concerned with who makes the judgments, when, and on what basis.
- Faculty-Student interaction: the relationships between faculty members and students, individually and collectively, and between the student and his peers. The concern is with the types of roles played by the individuals and groups concerned.
- Student experience: the experiences the student is expected to undergo outside the classroom, and the role they play in the students' education.
- Freedom/Control: who has, or takes, or is given the responsibility for what decisions.

Axelrod sees the first three elements as static, structural elements that must be combined with the last three "implemental" elements. Theoretically, the elements could combine in almost limitless ways; however, the limitations are imposed by the implemental elements and depend upon the college or university situation.

The futility of changing one element alone was illustrated at a Danforth Workshop on Liberal Arts Education:

> One of the liberal arts college teams participating in the workshop reported that their institution had run into difficulties in its attempt to reform the freshman composition course. In the summer of 1967, the college had decided to replace its plan for teaching English composition . . . Plan X, with a new plan, Play Y. But Plan Y had not "worked" and the Workshop team proposed to discover what had gone wrong.
>
> Analysis revealed that although the English staff did not like Plan X, it did have one undeniable advantage: it fit the standard schedule system perfectly. Plan X was possible of realization . . . with 50-minute, three-times-per-week periods. Plan Y, on the other hand, required . . . a combination of different class periods–e.g., 30-minute sessions for certain of its purposes . . . and three-hour sessions for certain other purposes.

Moreover, Plan Y required several different kinds of classroom space, both on and off-campus, the use of upperclassmen as tutors and teachers, and different numbers of teachers at different meetings of the class. Plan X more comfortably used one classroom, one time-period, one teacher, and involved none of the logistical difficulties of the more novel approach.

The operational difficulties of achieving curricular reform are frequently increased by the lack of provisions for on-going evaluation after a curricular change. If provisions are made, they are often inadequate. The authors of the *Study of Education at Stanford* have commented upon the problem at that institution: in 1956, a curricular revision at Stanford recommended that continuing review and improvement was integral to the success of the recommended changes. "Primarily because no institutional mechanisms were in fact provided, the hope expressed . . . 'that self-study at Stanford . . . become a permanent habit of mind' . . . was not realized. Meanwhile, the University and its student body underwent a period of rapid change, with which the program did not keep pace."[36]

Repeatedly, the literature recommends that on-going review of the curriculum is necessary if reform is to be successful. Some curricular committees, such as Concordia's and Stanford's, have even suggested separately budgeted offices so that new suggestions can be objectively viewed and acted upon. For maximum effectiveness, it is often suggested that review committees be comprised of different individuals than those who originally proposed the new curriculum, since new members can probably view criticisms of the curriculum and proposals for change more objectively.

Conclusions

Conclusions about the undergraduate curriculum and the possibilities of successful reform are probably more dangerous than the usual generalizations heard about colleges and universities. There are so many issues involved at such different levels of complexity that virtually any position taken is open to legitimate question.

However, from the problems identified in this review, it does seem essential if curricular reform is to take place that three factors be present: (1) more faculty interest in both the needs of the undergraduates and in teaching freshmen and sophomores; (2) a better understanding of the relationships between the curriculum and other aspects of undergraduate education, such as grading; and (3) on-going review and evaluation so that curricular reform measures do not become tomorrow's curricular crisis.

And beyond these changes, the Hazen Foundation's perception should be acknowledged–today's undergraduate student cannot be stereotyped.[9] Most educators realize that sophisticated city high school graduates with definite career interests have different needs from rural students who are attempting to understand the modern technological world. Successful curricular reform should accommodate these contrasting needs.

CURRICULAR PROPOSALS AND PROGRAMS

New approaches to undergraduate education are being proposed and adopted which attempt to meet some of the requests of reformers and students: more flexibility in requirements, decrease in the insistence upon the traditional course-credit structure, decreases in the demand for specialization, more contact between faculty members and students, and increase in the number of programs that view education as a partnership between student and professor rather than as a contest between the two.

The proposals presented by various reformers range from totally required programs of study to totally elective programs. Some of the proposals are capable of immediate implementation and would require little change in the physical facilities required in higher education, and only moderate changes in attitudes toward education. Other proposals are visionary, would take years to implement properly, and would revolutionize education if adopted. The proposals are presented in this report merely to demonstrate the wide range of possible alternatives to current curricula.

The actual curricula now being offered at various institutions also range from normative to highly unusual programs that have been developed after an examination of all aspects of undergraduate education. Again, these programs are presented to provide some idea of the range and diversity of current curricular practices.

The information for this section is taken primarily from the bibliography and the informational source is indicated. Information on particular institutions was frequently obtained in reviewing other works on the curriculum. In these cases, the curriculum is described only if it has been corroborated with a recent catalogue. Particular acknowledgment should be made to Brick and McGrath [2], Dressel and DeLisle [4], and Mayhew [46] for references to many of these institutions.

I. SOME CURRICULAR PROPOSALS: MODELS FOR THE FUTURE?

Axelrod's Models [bibliographic item 40]

Axelrod maintains that the standard undergraduate education has fostered uniformity in the curriculum, depersonalized relations on the campus, set "depth" against "breadth" and achieved neither, isolated the campus and the curriculum from the real world, and fostered the concept that the student learns by numbers—credits, grades, hours. Moreover, the standard model for the curriculum is based upon outdated notions of how people learn.

He proposes several models to remedy these problems. In general, he sees the following as common, differentiating factors separating the new models from the old: small primary groups foster relationships among the students and between the students and faculty; materials in the programs are not fragmented as in the old models, since academic experiences and community actions are blended for credit; teaching and learning are viewed as cooperative inquiry and therefore the grading game is not played.

Curricular Model M

Curricular Model M is visualized as a cluster college at a large urban university that operates throughout the year so that the student can earn his degree in three years. The first 2 years, the freshman and middle year, constitute the Lower Division; the third year, the senior year, makes up the Upper Division. The offerings are divided into four major areas: Humanistic Studies, Natural Sciences, Social and Behavioral Sciences, and the Department of Language and Mathematics.

In the Lower Division years, the student is a member of a "primary group" of 75 students and 5 staff members. Four of the staff are faculty members, the fifth being the Primary Group Coordinator, the basic administrative officer of the group. Each student takes four courses per term, worth 8 quarter-hours of credit. The primary group meets sometimes *en masse*; however, it normally is split into groups of 25. The number of students meeting, the composition of the group, and the frequency of meetings is held flexible. After 1 year, the entire primary group is reconstituted; if the participants wish to dissolve after a term and form different primary groups, they may do so.

The faculty follows a schedule of working with a freshmen, middle year and senior year group in succession. During the fourth year, the faculty member receives a non-teaching assignment in which he may study, write or help redesign the curriculum.

The major principle in the curriculum is a progression from concrete experiential materials in the freshman year to the formulation of general principles by the senior year. The corollary to this principle is that an intimate relationship between the classroom and the outside world must be maintained. During the first year the student focuses on the local community; in the second year he focuses on the national and world communities; and in the senior year he chooses from the local, national or international aspects of the world as he pleases. This senior year is the year of "concentration" in the department of the student's choice. At the end of this third year a comprehensive examination is given in which the student is expected to demonstrate his skill in the learning process. Grades are not awarded throughout the student's 3 years; if the student does not satisfactorily complete the comprehensive examination, a faculty-student committee decides whether to award the degree.

Inquiry is stressed in the curriculum. Skills or factual material that could be learned elsewhere will not be stressed in class, since this is seen as a misuse of time for both student and faculty member. Students are expected to use the Learning Center for the acquisition of this type of knowledge; for example, typing, playing musical instruments, or learning to converse in a language would be learned with the assistance of the Learning Center personnel who are trained professionals but not faculty members.

Curricular Model P

Axelrod describes this model as a B.A. program for Future Studies. It is a largely prescribed program designed to help the student understand the past and present and anticipate the future. During the 4 years of this program, the student follows six sequential courses: history, science and technology, values, the city, mathematics and related studies, and intercultural studies.

In the *history* course the student sequentially studies western civilization, developing nations, abrupt change, and

the "history of the future," which apparently means examining possible future developments.

In the first 2 years the *science and technology* course offers Biopsychology and Genetics and Technological Change—courses designed to study the internal and external "environment." In the third year the student studies Technology of War and Peace, which includes examining arms control, world health and population control. In the fourth year the student concentrates on the application and control of alternative future technologies.

Values sequentially focuses upon imaginative literature, non-verbal arts, value systems, and normative social systems such as law.

The *city* involves the formal study of urban problems and actual experience in related projects within the city.

Mathematics and related studies includes over the 4 years of undergraduate work statistical analysis, formal and symbolic logic, game theory, and the projection of simple and complex trends.

Intercultural studies attempt to develop contrasts between cultures and for 3 years focuses upon Europe, Asia or Africa, and America. In the fourth year the student may conduct his own project or concentrate upon the country or area of his choice.

Model for an Interdisciplinary Degree in the Humanities

The curriculum of this model, which Axelrod adapted from a curriculum designed by Harold Zyskind of SUNY at Stony Brook, is divided into three stages. Stage I is concerned with interdisciplinary concepts and includes topics common to all the humanities. Stage II, the disciplines, deals with the humanistic disciplines and stresses their uniqueness to help the student perceive the differences between them. Stage III, values, attempts to bring the humanistic studies back into unity but through different principles of organization.

The material is presented variously in each stage, the differences intended to produce different results. In Stage I a rhetorical method brings the students into direct and vivid encounter with challenging ideas of great importance to man. This stage is an encounter with ideas to prompt discovery and awakening. Stage II concerns the development of disciplinary methods with emphasis on structure. It is hoped that the student will develop the ability to reconstruct from a given set of circumstances. In stage III the disciplines are treated "dialectically", so that each discipline is encompassed within a larger intellectual context. The purpose is to move the student from analysis to judgment. Hopefully, the end product will be commitment.

The Consent Unit [Items 43, 50, 51]

As more students enter college and existing institutions grow larger, many educators such as Trow and Yeo maintain that colleges and universities should provide different kinds of educational experiences from which the students can freely choose.

Trow advocates what he terms a "consent unit—a group of students and teachers who come together freely to teach and learn some skills or to explore some problems or issues or ideas." He feels that this is "perhaps the only effective organization of learning." In many respects Trow visualizes consent units as resembling graduate departments: they will be small and govern their own admissions and educational offerings. The criteria for admission will vary as will the course offerings:

> Some of them [the units] will be committed to traditional, scholarly work, and require evidence of interest in pursuing that kind of bookish studies. Other units may center on providing vocational training for more or less specific occupations, with the requirement that there be some expression of interest in preparing for those occupations. Still others may organize some kind of service to the larger community, and quite different criteria may be applied to candidates for such units.

One form of the consent unit, the cluster college, is already in use on some campuses. Yeo, claiming that the average college has grown from 14 faculty members and 143 students in 1880 to approximately 300 faculty members and over 3,000 students today, feels that the cluster college can provide the personalization which once characterized undergraduate education. He also notes that in addition to basing cluster colleges on curricular lines, they can be based on majors, class standing, characteristics such as sex or race, or random lottery. Obviously to fit the consent unit pattern the student must have some choice in selecting his college within the cluster.

The Tussman Program [Items 23 and 39]

Professor Tussman of the University of California at Berkeley designed a 2-year program to revise general education. He felt that the first 2 years of college life were the weakest part of college education and for the most part accepted specialization in the last 2 years. His program is a descendent of the Meiklejohn experiment at Wisconsin in the 1920's. Two groups of students completed the Tussman program; one group began in 1966, the other in 1968. The program has now been terminated and the possibilities of further experimentation or enlargement are being considered.

Maintaining that the division of knowledge into courses is highly artificial, and that a student is lucky if he receives four or five good courses in the 4 undergraduate years, Tussman substituted the notion of central problems for courses or credits.

The program was built entirely around a series of required readings and involved reading, daily writing, and the discussion of fundamental human problems. The focus was on periods of human history when a crisis evoked "a broad range of thoughtful and brilliant response." The first and second semesters focused on the Peloponnesian War in

Greece; the third semester focused on 17th century England; and the fourth semester focused on America. In order to allow students to meet university graduation requirements such as languages or to complete prerequisites for junior standing in their major, one elective was allowed each term.

Although Tussman admits that it is pretentious to say the students were studying freedom, order, justice, authority, conscience, war, rebellion and tyranny, these basically were the concerns of the program. The concerns were approached by readings sparse enough to allow time for the student to reflect about what he had read. Two 2-hour lectures or panel discussions were held every week, and discussion sections of eight students met twice a week—once with and once without a faculty member. The total program took place in one house without living accommodations but available 24-hours-a-day.

The totally required nature of the program did pose some problems, in that some students wished to choose their own readings. Tussman maintained, however, that the faculty should know what would interest the students, and in time the students would become interested in what they were studying since the themes were universal.

The Library-College [Items 47, 48, 49]

The concept of the "Library-College" has been advanced by librarians in recent years. Maintaining that the Library-College can solve the problems of impersonality, lock-step learning, and rigid curricula, Library-College advocates see the library as the college.

Independent study by the student is the essence of the library-college idea. Louis Shores, the leading advocate of this approach, speaks in terms of the "generic book" which is basically any possible communications tool such as a book, film, magazine, tape, or programmed material. The library-college would make these materials available to the student and would involve teachers as bibliographers and librarians as teachers to direct the student in his studies. New teaching methodologies would be used, since every student would have a carrel equipped with tapes, slides, and microfiche capabilities. The student could therefore pursue his interests independently.

Currently no colleges have adopted this concept, although some institutions are utilizing "learning-resources centers" and "media centers" based on this concept.

The University as Resource Center [Items 42, 44, 45]

Increasingly, proposals are being seriously advanced to provide alternate channels for the granting of degrees with some spokesmen urging institutions to stop awarding degrees entirely.

Warren Martin suggests that each institution offer several curricular options. One option might be the conventional schedule of 2 years of general education and 2 years of specialization. Another option might be a curricula based on historical epochs to fulfill general education requirements (similar to the Tussman program). Still another option might be an independent course of study for students selected by the faculty. Finally, Martin feels that programs would be designed on the institute model. A student could work with a faculty member, or a group of students could work with a number of faculty members, to design and develop research projects. Depending upon the project, it could meet general or major requirements or all degree requirements.

Peter Caws proposes a more ambitious design. Assuming that high schools and junior colleges would in many respects take over some functions of the college, Caws suggests admitting students to the University on two criteria: either they had exhausted other possibilities of education or they could profit from further work at the university. The students could continue as long as they met the entrance requirement of profiting from further work. Generally, upon separation, the student would be given a certificate stating that he had completed a certain number of year's work at the institution with notations concerning the courses he had studied. Degrees would not be awarded.

Harold Hodgkinson proposes a further step. To him, the university should serve as a true educational resource for anyone who wishes to use it. Codification (class standing), evaluation (grading), certification (degree granting) along with admissions requirements should be abolished.

Since the objective of this hypothetical institution would be to include as many people as possible, and since students could remain for as long or as short a period of time as they wished, very different types of people could mix on campus—from high school dropouts to advanced scholars. Since some students might sign up for only a few days at a time, they should be charged on a prorated, daily basis.

Bell's "Third Tier" [Item 41, briefly outlined and discussed in Item 16]

Daniel Bell has proposed curricula based on his perceptions of the learning process and the problems of the standard curricular model. Bell sees the acquisition of knowledge as a different process in three areas of human knowledge: humanities, social science, and science. In science the acquisition of knowledge is *sequential*, subject matter is built on subject matter in linear fashion. In social science, Bell feels that knowledge is *linked*; that is, the understanding of one area of social science depends upon some knowledge of the others. For example, an understanding of economics presupposes some knowledge of political science. In the humanities, knowledge is *concentric*; that is, the major themes of mankind can be developed and enlarged through different approaches.

Therefore, Bell feels that a grounding in a discipline is necessary before interdisciplinary work in the social sciences can begin. In the humanities, Bell feels that if high schools concentrate on composition and classification, colleges can concentrate on developing deeper meanings. In the sciences, he feels that earlier concentration can begin.

Bell proposes that the curriculum be based on the following principles: the first year should be devoted to the acquisition of historical and background information, the second and third years to a training in a discipline and its related fields, and the fourth year to a combination of seminar work in the discipline and participation in integrative courses. The integrative courses, "the third tier" would concentrate on one of the major areas of science, the humanities, or social science. The third-tier course would be designed to demonstrate to the student how his subject would apply to a problem, or demonstrate the broad foundations of the discipline. Basically, Bell advocates presenting the student with broad background information in the first year, allowing him to study a discipline and its related fields for 2 years, and offering him integrative courses in the fourth year.

Mayhew—Some General Thoughts on Curriculum [Item 46]

Although Mayhew has not developed a total curriculum, he has proposed some general considerations for curricular construction. He suggests that if the standard curricular model is to be maintained, general education should comprise one-quarter of the program, liberal education one-quarter of the program, and the major no more than one-half of the program. As far as general education is concerned, he feels it should be regarded as nothing more than a common set of experiences, and that courses should be selected for the general education program if they have value for people living in the 20th century.

Mayhew does believe, however, that general education might touch upon the areas that concern young people. Conscientious objection or law and order might be considered in an ethics class; law and economics might be discussed in relation to a post-industrial society; literature could be selected to evoke emotional responses from students.

Drawing from English traditions, Mayhew suggests that since studying five or six subjects at once can fragment the student's time, the tutor style of education might be incorporated into American education. Again, the English annually schedule lectures of general interest which the student can feel free to attend or skip, depending upon whether he felt the need for brushing up on the subject or not. Mayhew feels that scheduling lectures on subjects such as American History might be feasible in our institutions.

A group of unrelated suggestions from Mayhew include: off-campus experience within the curriculum, the banning of dry disciplinary courses for the freshman year, holding as few classes as possible to maximize the possibility of attaining more "peak learning periods," and the grouping of students to fulfill their need for personal relationships. An absolute necessity for curricular reform, according to Mayhew, is more interest in students on the part of teachers.

II. CURRENT INSTITUTIONAL PROGRAMS

Allegheny College, Meadville, Pennsylvania

Based on their experience with the Independent Study Program, the college in 1968 began an Individualized Curriculum for Independent Study available to all students in good academic standing. Any student who has completed his freshman year and wishes to pursue study in an area not adequately covered in the regular curriculum may submit a written design for his own curriculum. The program may be on or off campus and the student can design the evaluation of his work. The students are encouraged to consult with faculty members in designing their program, and the program must be approved by the Committee on Individualized Curriculum for Independent Study. This committee also is responsible for the evaluation of the final work. Proposals may be for up to one academic year's work, and students may undertake more than one independent study curriculum. Grading is on an Honors, Satisfactory, or Unsatisfactory basis.

Antioch College, Yellow Springs, Ohio

In 1958 Antioch introduced a general education program consisting of three levels. At the first level, the student was to take the equivalent of 10 quarter credits in each of three areas (arts and humanities, physical sciences, and social sciences), pass the mathematics and English skills examinations, and the Level I achievement examination in each area. Level II requirements meant completing 10 credits in each of the three academic areas and the Level II achievement examination. Level III requirements involved only the General Education Seminar.

The "equivalency" requirement in each of the three areas consisted of not only formal classwork, but also an

extramural quarter in which the student undertook off-campus study, or research, or a project. The faculty decided in which areas the credit for this work would be assigned.

Recently the three level system was abandoned, and Antioch students now have two methods from which to choose to meet general education requirements: they either complete 20 credits in each of the three academic areas (similar to the old program) or they complete the Basic Explorations Program. The Basic Explorations Program engages the student and his advisor in the design of a program so that the student can learn to function in a variety of environments. The student is expected to pursue his program in both a formal academic manner and in nontraditional ways, such as working.

Grades are not given at Antioch. Instead, the students receive a notation of Credit or No Credit. Credit statements are marked on the student's transcript. No Credit statements are not included on the public transcript since this work does not count toward a degree. In addition, for recommendation purposes, the Registrar may file written evaluations from the instructor in the student's file.

Baker University, Baldwin City, Kansas

In the Fall of 1968, Baker instituted a 4-1-4 curriculum on its campus by which each student takes four courses in the first semester, one course under independent study in a 5-week interim term, and four courses in the second semester.

A six semester core curriculum reduces the old core program by one-third and is built around the theme of "man's search for meaning." Now in its third year, the order of courses is Man Examines his Society, Man's Modern Predicament, Man Discovers Himself, Man and His Technology, and in the last two semesters, Western Man Encounters the Non-Western World.

Large lecture sections are followed by small discussion groups. The lecturers are specialists in their field, the discussion leaders are not. The curriculum attempts to bring the disciplines in the sciences, social sciences, and humanities together to bear upon the problems considered.

Beloit College, Beloit, Wisconsin

The Beloit Plan, begun in the Fall of 1964, is based upon an Underclass Year of three terms, a Middleclass Period of five terms, and an Upperclass Year of three terms.

The Underclass Year features a three-term common course which all students take. The course is devoted to enduring themes which have had an impact upon man. In the Middleclass Period, two of the five terms are credit terms. These terms are either on campus, involving study for area examinations in social science, humanities, and natural sciences or studying in the major; or off-campus, involving study in a credit project. A third term is spent off-campus in a non-credit field program approved by the college. The remaining two terms may be used for vacation or further off-campus study. The Upperclass Year is seen as a time to share off-campus experiences with other students and prepare for graduate school. Comprehensive evaluation in the major area is required and one of two special contemporary issues courses is required: Revolution in the Contemporary World, or An Ecology of Man in Urban America.

Brown University, Providence, Rhode Island [Item 27]

Brown's new curriculum adopted in the Spring of 1969, developed from the efforts of a group of students who spent almost 2 years in an independent study project studying the curriculum. A massive working paper was compiled and faculty and students studied it for a year. Three days were devoted by all segments of the University community to final consideration of the proposals.

Specific quantity requirements were abolished in the major or concentration program; distribution requirements in general education have also been dropped. In the concentration, faculty members consult with students to determine their interests. "Standard" concentrations are outlined for students who wish to use them, but the value of the individually tailored program is stressed to the student.

Hoping to make the student's first encounter with the University more meaningful, Modes of Thought courses have been adopted for freshmen. These courses, designed to bring no more than 20 students into a seminar, deal with underlying concepts that relate one area of inquiry to another, in place of the rather narrow, content oriented surveys typically offered in freshman courses. The Modes of Thought courses are designed and offered by individual members of the faculty, not by departments, and will be discontinued when the faculty member no longer has interest in teaching it. Many of these courses will be built around broad themes like "Revolution," and will combine material from various disciplines.

University Courses, similar in many respects to the Modes of Thought courses, will also be offered. They will be designed primarily for upperclassmen and will, therefore, be at a deeper level of analysis. These courses will emphasize basic approaches to knowledge, the nature of central problems, the various modes of conceptualization and evaluation, and might deal with exploring relationships between disciplines, the problems within disciplines, or the relationship of one discipline to a broader context.

The grading system will depend upon the instructor's discretion. All course work will be graded either A,B,C, or simply as Satisfactory. If the student wishes the Satisfactory grade rather than a letter grade, he may request it. No credit will be given for unsatisfactory or failing work, and these courses will not be entered upon the student's transcript. The main measure of the student's progress is the completion of specified numbers of courses at specified intervals.

Carleton College, Northfield, Minnesota
[Item 35]

In 1961 Carleton adopted a 3-3 program of studies (so named since the student took three courses in each of three 10-week terms). A major problem arose in the humanities and the social sciences due to pressure on both students and faculty of examinations and papers in the short term. In 1967, a 4-1-4 scheme was proposed and rejected in favor of a "variable credit system" that allowed departments to offer courses of varying lengths for different amounts of credit.

Under the variable credit system, the standard course is worth six credits and other courses are valued at one, two, three, or four credits, depending upon the length of the course and the number of meetings. Fifteen-week courses were also instituted, valued at six or nine credits, depending upon the number of meetings.

Carleton has also instituted interdisciplinary seminars for freshmen on current problems. The seminars are designed to stimulate discussion within groups of no more than 15 students. The seminars are designed by the departments of philosophy, history, religion, classics, English, modern languages, art, and music.

Carnegie-Mellon University,
Pittsburgh, Pennsylvania [Item 26]

A new college of humanities and social sciences was designed by Carnegie-Mellon and opened in September 1969. Its purpose was to initiate the student into a process of change throughout his life, to integrate specialized and general knowledge, and to make the student an intellectually independent and emotionally responsible individual.

The freshman year, the focal point of the new college, involves a free seminar, a developmental course, a mathematics course, a laboratory arts course, a history-English course, and a seminar in a special area. In the second year the student fulfills the area distribution requirements of the university.

The free seminar is the major point of personal contact between the student and the institution, and is devoted to feedback to the student, intellectual stimulation, and feedback from the student to the college. The students tend to discuss themselves and the group in this seminar, which often tends to overlap with the developmental course. The developmental course is designed to force the student to examine himself in relation to the college, his family, and society.

The mathematics and laboratory arts courses are basically designed to make students feel at ease in areas where they feel a lack of ability. The mathematics course is designed to break the mathematics "block" that so many non-mathematicians feel and to acquaint them with the manipulation of mathematics through, for example, the use of computers. In the laboratory arts course, the object is to develop artistic awareness in "non-artists" through seeing, listening, and doing.

The special area seminar is designed so that small groups of students can pursue scholarly research under the supervision of a faculty member.

The non-classroom experiences of the student are also considered in the new college. The concept of "meta-curriculum" is used to indicate that the out-of-class activities of the student are integrated with his formal classwork. At least one event each week, chosen from activities such as lectures, concerts, visits to industrial plants, or discussions with business leaders is considered essential to the curriculum.

Colorado College, Colorado Springs,
Colorado [Item 25]

In the Fall, 1970, Colorado College adopted a program of studies based on a modular calendar which offered courses one-at-a-time to students. The courses vary in length and value.

Within the framework of the regular two-semester year, the year is divided into modules of time of three or three and one-half weeks length. The fall semester at Colorado is thirteen and one-half weeks long, and the spring semester is 17 weeks; therefore there are four modules in the fall, and five in the spring.

Within the framework of the modules, courses are taken individually. Depending upon the content of the course, it is categorized as either a principal course, an extended half-course, or an adjunct course. Principal courses run from one to three modules and are either single courses on a stated subject or interdisciplinary courses involving several professors and a large number of students. In either case, the course is a full-time load and is expected to occupy the student for 7 or 8 hours per day. Extended half-courses are for particularly demanding or time-consuming subjects and are offered for ten and one-half weeks. Two extended half-courses constitute a full-time load. The adjunct course—typically dance or choir—runs for a full semester or a year, and the student can take two adjunct courses in addition to his full-time load.

To implement this program, the concept of a "classroom" for the use of various courses is replaced by the concept of the "course room," which is reserved exclusively for specific courses. All activity centers around the course room. Since it is available for only one course, it can be changed or rearranged to meet the needs of the course. Professors and students set their own schedules for the use of the room.

The rationale of the program is that it will give coherence to the student's studies, which were fragmented over many courses taken within one period. It will also translate the faculty-student ratio into actual class size, since the faculty member will no longer be teaching fewer classes than the average student is taking.

Concordia College, Moorhead, Minnesota
[Item 34]

Curriculum reform at Concordia was undertaken by a budgeted committee supported by the Board of Trustees over the summer of 1969. The result was a comprehensive review of problems associated with curricula, such as the philosophy of liberal arts education, faculty recruitment, costs, graduate school requirements, educational technology, library requirements, academic calendar, and the type of student at Concordia. Based on these considerations, the committee recommended a new curriculum to the administration and faculty, and strongly stressed that a Director of Liberal Arts, and a Core Committee be established to ensure that the Core Curriculum maintained its objectives, and that the departments focused sufficient resources upon the general education program.

The course plan was adopted in place of credits in an effort to reduce the fragmentation of the student's efforts. Since only 30 courses were to be required for graduation, two semesters would involve less than four courses, and the student can choose which semesters would make up the reduced load.

The core curriculum involves both skill and distribution requirements. The student has to meet the skills requirement in writing and in college-level language through a course designed by the department of English, Speech, and Philosophy, focusing on composition, argumentation, and research. The distribution requirements involve six "sets" of courses available from three divisions. The divisions are: Quantitative and Life Sciences, Society and Civilization, and Arts and Language. The student is expected to take four courses from the two divisions in which he does not major. An integration requirement (a seminar in the junior or senior year), religion requirements, and physical education requirements complete the core curriculum. The standard major continues to be required.

Florida Presbyterian College,
St. Petersburg, Florida

The curriculum at Florida Presbyterian emphasizes the interrelatedness of knowledge and the value of independent study in a 4-year core program required of all students. The College was founded in 1960 and began with this basic curriculum. The first 2 years of the core program deal with Western Civilization, the third year with Asian and East Asian, Latin American, or Soviet Studies, and the fourth year with Christian Faith and Great Issues. The core program is taught through large lectures and small discussion groups; the typical structure involves 10 men teaching the course and leading the discussion groups.

The curriculum is based on the 4-1-4 model, and the winter term is devoted to individual research and study under the guidance of one of the professors. In addition to the independent study features of the winter term, students may study any topic not offered in the curriculum if they receive the sponsorship of a professor.

Grading is based on High Pass, Pass, and Fail.

Hampshire College, Amherst, Massachusetts [Item 33]

Hampshire opened in the Fall of 1970 under the sponsorship of Amherst, Mount Holyoke, Smith, and the University of Massachusetts. As a new institution, the entire curriculum is not yet operational and some of its projected features may be abandoned as experience dictates. Currently, only the Division of Basic Studies, the student's first encounter with Hampshire, is in operation. In many respects, Hampshire is a close model of Bell's third-tier suggestion.

The curriculum is aimed at preventing narrow specialization to dominate the student's program and, while allowing great freedom of student choice, at preventing a totally elective program. The divisional sequence at Hampshire is comprised of the Division of Basic Studies, the Division of Disciplinary Studies, and The Division of Advanced Studies. In Basic Studies the student is introduced to the intentions and process of liberal education for 1 year. Limited but direct experience in the use of the disciplines of the four divisional areas—humanities, natural sciences, social sciences, and the languages— is involved. Humanities is seen as the study of man as revealed in his art, literature, music, history, religion, and philosophy. Natural sciences involve the study of the inorganic and organic environment of man, and the study of man as an organism. The social sciences involve the study of man and society in their historical, economic, sociological, psychological, and philosophical settings. Languages included logic and mathematics, and the central focus is upon communication. Psycholinguistics is seen as an integral part of this division, and concentrates on phonology, semantics, biological correlates of speech, and paralinguistics, that is linguistic cues such as tempo and loudness. When the student has completed the Division I field and integrative examinations in the four divisional areas he has completed the Division I sequence.

The Division of Disciplinary Studies involves 2 years in which the student may explore the four divisional disciplines, become accepted as a major student in one of the areas, and begin study in that area and its related fields. This division is completed when the student passes the School Examination in his discipline and related subjects, and field and integrative examinations outside his area.

The Division of Advanced Studies comprises the student's last year. One-half of the sequence entails independent study within a discipline, the other half involves an advanced, integrative, one-term seminar on a broad topic requiring the application of various disciplines.

No courses are seen as absolutely required for a degree. Advancing at his own speed, the student is expected to pass only the necessary examinations at the conclusion of each division, complete a Division III intensive independent

study project, and demonstrate foreign language competence.

James Madison College, The Michigan State University [Item 29]

The James Madison College, a 4-year residential college, was founded in the fall of 1967. Its program of studies stresses major social, economic, and political policy problems. A primary objective of the college is to combine the advantages of a small liberal arts institution with the facilities of a large university. Classrooms, cultural programs, student social and dormitory rooms, as well as faculty offices are housed within a single academic-residential setting. The primary means of instruction are the seminar, the tutorial setting, field work, team-teaching, and independent study.

The curriculum is a multidisciplinary, social science program for undergraduates and focuses on the problems of contemporary society. Students elect one of five policy problem areas for concentration: Ethnic and Religious Intergroup Relations Policy Problems, International Relations Policy Problems, Justice, Morality and Constitutional Democracy Policy Problems, Socio-Economic Regulatory and Welfare Policy Problems, and Urban Community Policy Problems. No more than half of the required number of hours required for the degree can be earned at James Madison; the rest are earned at other colleges within Michigan State.

The General Education program involves completion of requirements in the humanities, natural sciences, and social sciences, and the demonstration of language and writing skills. The writing skills requirement is met by completing a substantial paper each year. A supervised field experience is also required, and the work is available with public and private organizations so that students can observe the policymaking process at work.

Loyola College, Baltimore, Maryland [Item 28]

In 1969, Loyola adapted the 4-1-4 program to its curricular needs. (As at Baker University, this involved 4 courses in the fall semester, one course in the "minimester" and four courses in the spring semester.) Under this program, Loyola requires 35 courses for graduation. Sixteen of these courses are reserved for the core program, approximately 10 are required for the major and related courses, six are electives, and three are for the "minimester." Students are encouraged but not required to take a course in the fourth interim semester.

A proficiency examination in English is given to all freshmen; satisfactory completion allows the student to waive the English Composition requirement. In the interim term, students have the option of completing various classes, seminars, and projects on- and off-campus. Grading is generally on a Pass-No Credit basis in these courses; however, the student may elect to receive a grade if the professor feels that grades are appropriate for the course.

New College, Sarasota, Florida [Item 32]

The New College opened in 1964 and adopted its present curriculum in 1969. Basically the student is offered two options for the completion of degree requirements: the contractual and the noncontractual program.

Under the contractual program the student designs his own course of study in consultation with two faculty sponsors. Term by term, the student develops that combination of courses, tutorials, and assignments that best meet his needs. At the end of each term, the sponsors certify that the student has met his contract. If the student fails to fulfill his contract, the sponsors, within limitations, can determine the conditions under which he can remain in school. In addition to the contract, the student is also expected to meet other requirements. Four Independent Study Projects (ISP's) must be completed before the final year and the student's individual choice of topic, method of procedure, and type of presentation are encouraged. A Senior Project is also required in the contractual program. This project is seen as the culmination of a student's independent study and generally provides the basis for the baccalaureate examination. In addition to the baccalaureate examination, the only other examination in the program is the Qualifying Examination, taken before the student enters his last 2 years and intended to test his readiness for disciplinary work.

Under the noncontractual program, an advisor assists the student in designing his program and a specific contract does not exist. Three undertakings are required for the degree: seminars, lectures, and/or tutorials each term; five independent projects; and baccalaureate examinations in the areas the student designates.

The degree requirements at New College are basically simple: nine terms of residence at the college; satisfactory record term by term, which can be achieved either through certification by sponsors or by a record of three satisfactory undertakings for each of nine terms of residence; independent study, which can be met through either four ISP's and a senior project or by five ISP's for the noncontractual student; a baccalaureate examination. Satisfactory progress toward the degree is the major check upon the student's standing and eligibility to continue.

Prescott College, Prescott, Arizona

Prescott opened in 1966 with a curriculum based on five teaching and research areas: (1) The Center for Contemporary Civilization studies common forms and process across nations; (2) The Center for Language considers language as a symbolic, creative process, and examines the language of senses, form, symbolism, and myth; (3) The

Center for Man and Environment studies man as an organism in various cultures, society, and in relation to nature and the universe; (4) The Center for the Person considers the interdependence of the physical, mental, and spiritual growth of man; and (5) The Center for Systems is concerned with man's search for order.

Degree requirements at Prescott are met by satisfactory completion of 42 quarter courses, including two or more courses in each of the four academic centers in which the student does not major. The core requirement also includes the establishment of English writing proficiency not later than the end of the sophomore year, as determined by the Center for Language. The major program of studies is determined individually between the student and his advisor.

Rutgers College, New Brunswick, New Jersey
[Item 37]

Professor Warren Susman studied the curriculum of the college of the State University of New Jersey for one semester in 1967-68. Some of his proposals for Rutgers are still being debated by the faculty, but some have already been approved.

Susman recommended that since freshmen did not have a department as a "home," that the college should establish four schools to which the student could tentatively apply: Humanistic Studies, Social Studies, Scientific Studies, and Applied Scientific Studies.

It was recommended that the course system be adopted. Four courses should be required each semester and 32 courses for graduation. Moreover, in the first semester the student should be allowed to explore his interests through a series of mini-courses–6 or 7-week seminars available in every conceivable field. The students would be restricted to two courses in each school and one from each department. These courses would be ungraded and reading, writing, and discussions stressed.

Susman mentions that the college could assume that a student would distribute his work evenly outside his own school; but if core requirements were to be maintained, he recommended a distribution pattern to replace the older, general education program.

Grading and particularly examinations should be changed according to Susman. Grades for all courses should be restricted to Distinction, Pass, and Fail. Departments could give temporary grades in major subjects as they were completed. At the end of the senior year, Susman recommended a comprehensive examination in the major. The grade from the comprehensive examination would replace all temporary grades previously awarded.

Smith College, Northampton, Massachusetts

A new curriculum approved for the fall semester, 1970, dropped all specific requirements for graduation on the grounds that the diversity of the student body and the variety of subject matter available made a common, prescribed course of study inappropriate. Students are, however, encouraged to consider the following areas: English or foreign literature; history or historically oriented courses in the arts; social science, natural science, mathematics, the arts, and foreign language.

Thirty-two semester courses, plus six trimester courses in physical education are required for graduation. The student's program is divided into two areas: a required number of courses in the major and 16 courses outside the major. The remainder are electives that vary from three to seven courses, depending upon the major requirements. Approved independent study is encouraged and credit for up to two courses may be granted for appropriate, supervised, off-campus work related to the student's program.

Stanford University, Stanford, California
[Item 36]

The comprehensive *Study of Education at Stanford: Report to the University* covered all aspects of the Stanford University activities. Volume II deals with undergraduate education and gives a comprehensive overview of the curriculum and related matters. The recommendations of the study are in the process of review at Stanford; some of the recommendations have been approved, some are undergoing further study, and a few have been rejected or passed in modified form by the faculty senate.

Aware of the fact that on-going curricular reform had not become a part of the Stanford picture, the study recommended strengthening the office of Dean of Undergraduate Studies and the Committee on Undergraduate Studies.

Criticizing the old general education requirements as having become rigid, superficial, unjustifiably selective and divorced from reality, the study recommended the abolition of the general education requirements and the substitution of a distribution requirement.

In the freshman year, the study recommended a one-semester writing experience integrated with a regular course; a one-semester course in historical studies; a freshman tutorial for as many freshmen as possible who hoped to meet the writing and historical studies requirements. In addition, students demonstrating adequate capacity for independent study in the tutorial would be offered a second-semester tutorial.

Beyond the freshman year, the study recommended that students be encouraged to develop proficiency in a foreign language and its culture; that a department be allowed to prescribe no more than one-half of a student's program; that students be allowed to formulate their own programs under direction; and that a limited number of outstanding students be allowed to design their entire undergraduate program regardless of general or concentration requirements.

Since less than 8 percent of the undergraduates at Stanford receive D's or F's, these grades should be abolished. Under the new system, A would denote exceptional class performance, B superior performance, and C satisfactory performance. The only penalty for incomplete or unsatisfactory work would be loss of credit for the work attempted. To encourage student effort for the positive feature of proceeding toward the degree rather than the negative fear of failure, the study recommended that the transcript bear only the notations of work completed satisfactorily. In order to remain eligible to continue, the student would have to complete at least six semester courses at the end of the first year, 13 at the end of the second, and 21 at the end of the third.

Stephens College, Columbia, Missouri

Since 1960, 100 students have entered Stephens each year under the House Plan. This Plan is a living-learning-study situation in which the residence hall is the center for academic and residential life. Four teachers and a residence hall counselor direct the program. The offices and classrooms of the teachers are contained in the residence hall. Students are encouraged to develop their talents both in the residential-academic environment and through independent study.

All students take a 2-hour course called Ideas and Living Today. House Plan students also take four required courses: Literature and Writing, Basic Philosophical Concepts, Contemporary Social Issues, and General Humanities. Students with a B average or better may design their own honors program for approval by the advisor and Director of Honors Projects. After the project is completed, a written report and oral examination must be passed.

The library at Stephens, available to all students, is a modern learning center. It is a complex of five interconnected buildings and contains classrooms, laboratories, radio, television and film studios, art galleries and studios, and films, tapes and records.

Swarthmore College, Swarthmore, Pennsylvania
[Items 3 and 38]

The Swarthmore Honors Program has been a prototype for curricular committees interested in instituting such a program for decades. The program was begun at Swarthmore in the 1920's, and involves the selection of promising sophomores to "read" for Honors during their last 2 years. In the junior and senior years, the students study for eight examinations (papers) which are devised and graded solely by educators from outside Swarthmore. Oral examinations are also held. Small seminars and independent study are stressed in the program.

The other upperclassmen are called "Course" students. The Course students complete roughly twice the number of subjects as the Honors students; they do not, of course, go into as much depth as the Honors students. Approximately 45 percent of the juniors enter the Honors program and some 35 percent of the seniors graduate from it.

University of California, Santa Barbara, California

The College of Creative Studies was opened in 1967 and named to suggest the distinctiveness of the offerings. Students are especially selected on the basis of evidence of the ability to carry out independent, concentrated study. Majors offered include art, biology, chemistry, literature, mathematics, music theory and composition, and physics.

There are no specific course requirements; however, the student's program must be approved by his advisor. Students are allowed to enroll for credit in other colleges on the Santa Barbara campus. There are no prerequisites for any courses, enrollment requiring only the consent of the instructor; therefore, courses are not classified as upper or lower division.

Although no exact courses are required, students must take at least two courses from each of six curricular areas: Art, Life Science, Literature, Music, Physical Sciences and Mathematics, and Social Sciences and Philosophy.

Letter grades are not awarded. The grading system is a combination of Pass-Not Pass and the variable unit credit. For each course, the student may receive any number of units from 0 to 6. Zero is Not Pass, while any number from 1 to 6 is Pass. The student may arrange to complete any number of units of work with the instructor, but the instructor has the right to make the final determination of the unit value of the student's work. The student could, therefore, receive more or less units than arranged based on the quantity or quality of his final work. One hundred eighty quarter units of credit qualifies the student for graduation.

University of California, Santa Cruz, California

The Santa Cruz campus is a cluster college. Currently there are five colleges on the campus and more are planned. Although all the colleges primarily emphasize the liberal arts, each has adopted different intellectual interests. The first three colleges focus generally on the humanities, social sciences, and natural sciences. The fourth college is concerned with the problems of poverty at home and abroad in underdeveloped nations. The fifth college is concerned with the arts, fine arts, and popular arts of the twentieth century.

Beyond certain minimal university-wide requirements, Santa Cruz requirements vary from college to college. Some of the colleges have no required courses, some require a distribution pattern, one has a required core. Most of the colleges that have stipulated requirements have designed them to meet state-wide university requirements.

Students at Santa Cruz have the option of designing their own programs. However, designing such a program requires a strong commitment from the student and a great

deal of planning and work. It is not as widely used as might be expected according to an assistant to the Chancellor.

Villanova University, Villanova, Pennsylvania

The program of studies at Villanova is traditional in most respects and includes a core program based on a distribution sequence and a major. In addition, since the 1940's the College of Arts and Sciences has offered the B.A. and B.S. degrees in general programs for students who prefer not to select a major. In the B.A. program, the student substitutes electives from the humanities and social sciences for courses normally required in the major. The B.S. program is designed for the student with a definite interest in science who prefers a broader program than that available in the major, and the student's ability to substitute tends to be more restricted.

Wesleyan University, Middletown, Connecticut

Wesleyan revised its curriculum in 1968 and the new requirements for graduation are minimal: thirty-four semester courses of which approximately one-third are devoted to the major. Beyond these stipulations, no courses are prescribed for the student.

An advisor is assigned to each incoming freshman and this advisor's signature is required on the student's schedule until a departmental advisor assumes responsibility when the student selects his major. The advisor is regarded as a counselor and is not expected to dictate the student's choice of courses, although he will expect that the student present some reasonable plan of study. A review committee is available to arbitrate any differences between the student and the advisor as to the program of studies.

Although specific requirements do not exist, the university does recommend that the student at least consider the following areas: English language and composition, ancient and modern language and literatures, philosophy and religion, the arts, history and the social sciences, mathematics, and the natural sciences.

III. ANNOTATED BIBLIOGRAPHY

Curricular Studies

1. Armstrong, Jack L., "An Interim Term Digest." Macalaster College, St. Paul, Minnesota 55101. ED 040 667 (27p. MF-$.65; HC-$3.29) October, 1969.

This study lists all the colleges and universities the author could identify which are utilizing the 4-1-4 curricular approach and the various uses to which the four week "interim" term has been put.

2. Brick, Michael and Earl J. McGrath, *Innovation in Liberal Arts Colleges.* Published for the Institute of Higher Education by Teachers College Press, New York, 1969.

This book reports the findings of a survey of over 800 colleges and universities offering liberal arts programs. The survey was to determine which institutions had introduced novel and creative practices during the 1960's in curriculum.

3. Clark, Burton R., *The Distinctive College: Antioch, Reed, and Swarthmore.* Aldine Publishing Company, Chicago, 1970.

The author attempts to determine what factors go into the makeup of a first-rank liberal arts college and examines three institutions which developed differently. Although the curriculum is not the focal point of the book, each institution's curriculum is examined.

4. Dressel, Paul, and Frances H. DeLisle, *Undergraduate Curriculum Trends.* American Council on Education, Washington, D.C. 1969, $2.00

This is a detailed study of curricular trends from 1957 to 1967 at over 300 representative institutions in the United States. Comprehensive and unusual programs are commented upon.

5. Haswell, Harold A., and Clarence B. Lindquist, *Undergraduate Curriculum Patterns.* DHEW, Office of Education, Washington, D.C. 1965.

This work is a widely cited survey of curricular requirements on American campuses. The main conclusions are probably still applicable today.

6. McGrath, Earl J., *Memo to a College Faculty Member.* Published for the Institute of Higher Education by Teachers College, N.Y. 1961.

Addressed to college faculty members because of their crucial voice in curricular matters, this book attempts to make them aware of the financial implications of their course decisions. It is a study of the range and diversity of courses offered within the various disciplines at a number of liberal arts colleges, the suitability of the offerings to the institutional goals, and the financial implications of the offerings.

7. Tamminen, Paul G., *A Guide to Resources for Undergraduate Academic Reform.* A.C.E., Wash., D.C. June 1970.

A bibliographical guide to the resources available for the study of undergraduate learning, curriculum, teaching, technology, and grading.

Considerations in Curricular Reform

8. Blackburn, Robert T., *General Education in Liberal Arts Colleges.* New Dimensions in Higher Education, Number 24, Duke University, North Carolina, April, 1967. (ED 013 348, 90 p., MF-$.65; HC-$3.29)

Blackburn maintains that the general education movement died from inadequate leadership, disinterested faculty members,

rising enrollments, the demand for specialization, and changes in learning theory.

9. Committee on the Student in Higher Education, *The Student in Higher Education.* Hazen Foundation, New Haven, Conn., 1968. ED 028 735 (72 pages, MF-$.65; HC-$3.29)

This report maintains that a major problem in our colleges and universities is the fact that the developmental needs of undergraduates are ignored. Curriculum reform, although widely attempted, has generally been unsuccessful because the needs of the students are not considered.

10. Dressel, Paul L., *College and University Curriculum.* McCutchan Publishing Corporation, Berkeley, 1968.

The author appeals for curriculums planned in relation to major educational goals. Only such an approach, emphasizing cumulative actions, will achieve a unified curriculum. Discusses developments in liberal education, the disciplines, professional education and graduate education.

11. ———, *The Undergraduate Curriculum in Higher Education.* Center for Applied Research in Education, Inc., Washington, D.C. 1963.

This seven-year old study analyzed the underlying assumptions of curriculum in American higher education. Considered were: history of curriculum development, basic considerations of curriculum planning, philosophies of several models, principles for developing curriculum, and the training of college teachers.

12. *Journal of General Education*

Published quarterly by the Pennsylvania State University. Once the bible of the general education movement, the periodical now lists fewer articles on the subject, reflecting, many observers feel, the lessened interest in general education.

13. Katz, Joseph, *The Student Activists: Rights, Needs, and Powers of Undergraduates.* New Dimensions in Higher Education, Number 30. Duke University, North Carolina, April, 1967. ED 013 352. (78p. MF-$.65; HC-$3.29)

Katz claims that today's activists are more interested in university reform than the activists of the 1930's. He feels that a basic source of conflict in today's institutions is the opposing interests of the faculty, students, and administration.

14. Knapp, Patricia B., *The Academic Library Response to New Directions in Undergraduate Education,* Review Series Number 2, ERIC Clearinghouse for Library and Information Sciences, Minneapolis, Minnesota 55455. April, 1970. ED 039 390. (25 pages: MF-$.65; HC-$3.29)

This review discusses library changes in response to undergraduate changes in education; included are learning resource centers, and a brief discussion of the Library-College idea.

15. Machlup, Fritz, "Longer Education: Thinner, Broader, or Higher?" *Proceedings of the 1970 Invitational Conference on Testing Problems.* Educational Testing Service, Princeton, N.J. 1971.

The author maintains that higher education is beyond the abilities of most students and should be restricted to a carefully chosen group; other students should be offered general continuing education.

16. Lee, Calvin B.T. (ed.), *Improving College Teaching.* American Council on Education, Washington, D.C. 1967

Although primarily concerned with instruction, the section on curriculum contains articles by Daniel Bell, and commentaries on the paper by Donald Barr, R.J. Henle S.J., and Calvin B.T. Lee. The inclusion of an extensive curriculum section in a volume on teaching indicates the close relationship between the two.

17. Rice, James G. (ed.), *General Education: Current Ideas and Concerns.* Association for Higher Education, National Education Association, Washington, D.C., 1964.

This volume attempted to convey some of the concerns and problems of the general education movement as it developed after World War II. Articles by Morse, Goldberg, Keeton, Carpenter, Anderson, Reed, Carlin, and Blackman.

18. ———. "The Liberal Arts–Past, Present, Future." Council for the Advancement of Small Colleges, July, 1967, ED 017 527 (4 pages, MF-$.65; HC-$3.29)

In this brief article, Rice maintains that the liberal arts, once meant to be liberating, have become a stylized system. He argues that the purposes of liberal education should be to teach the student to seek knowledge for himself rather than teaching him to accept prepackaged facts. Rice also argues for more flexibility in curriculum and better teaching.

19. Rudy, Willis, *The Evolving Liberal Arts Curriculum: A Historical Review of Basic Themes.* Published for the Institute of Higher Education by the Teachers College, N.Y. 1960.

Rudy reviews the development of the liberal arts curriculum from 1825 to 1955. Institutional trends during the period are spotlighted in the northeast, midwest, south, far west and in Roman Catholic colleges. Implications for the future–as seen in 1960–were drawn. A useful review of the history of liberal arts curriculum.

20. Sanford, Nevitt, *Education for Individual Development.* New Dimensions in Higher Education, Number 31, Duke University, North Carolina, April, 1967. ED 013 353 (89 pages, MF-$.65; HC-$3.29)

Sanford maintains that education for today's student means preparing him for a changing world, an impersonal world, and a world in which he may change vocations several times. A theory of total personality and social theory must dictate the educational surroundings of today's students. The student is not a passive receiver; he must be involved in learning so that education develops independence of thought, creativity, and social responsibility.

21. ———. *Where Colleges Fail: A Study of the Student as a Person.* Jossey-Bass, San Francisco, 1967.

Sanford returns to his theme in *The American College:* colleges fail whenever they treat students as less than persons. Learning depends upon personality, not merely upon intelligence; until colleges are willing to accept this fact and act in accordance with student's developmental needs they will not improve.

22. Spurr, Stephen H., *Academic Degree Structures: Innovative Approaches. Principles of Reform in Degree Structures in the United States.* Printed for the Carnegie Commission on Higher Education by the McGraw-Hill Book Company, 1970.

A study of all degrees available in higher education today from the associate to post-doctoral recognition. Recommendations for modifications, particularly in terms of the time requirements for the various degrees, are included.

23. Terrey, Hall, (ed.), *Undergraduate Education: Issues and Directions.* Selected addresses from the Annual Fall Conference of the Association for Higher Education of the Washington Educational Association, Dec. 1-2, 1967. Washington Educational Association, Seattle, 1968. ED 021 537 (25 pages, MF-$.65; HC-$3.29)

Contains three addresses on curriculum and reactions to the addresses. Glen Leggett, Louis Mayhew, and Joseph Tussman deliver the addresses. Tussman's talk gives slightly different approach to the experiment he conducted in curriculum at Berkely, (see item 39).

24. Trow, Martin A., "Preliminary Findings From National Surveys of American Higher Education." Presented to the Carnegie Commission on Higher Education, January 15, 1971, Berkeley, California.

A brief report on the results of surveys taken among undergraduates, graduate students, and faculty members on curriculum, campus dissent, teaching, research, political views and related matters. Although 71% of the students agreed, with or without reservations, with the statement "most undergraduates in my college are satisfied with the education they are getting," 9 out of 10 of the students wished to make course work more relevant to contemporary problems, 8 out of 10 of them wished that more attention were paid to the emotional growth of students, and slightly over 50% of them wished that all courses were elective.

Institutional Publications

25. Brooks, Glenn, [Memoranda to the Colorado College Faculty]. Colorado Springs, Colorado, Summer, 1969. R.I.E., June, 1971, HE 001 958.

These three memoranda outline the modular plan at Colorado College. The first deals with some of the technical features of a modular plan; the second makes specific proposals for a new academic program; the third deals with related areas such as admissions, classroom use, and the library.

26. Carnegie-Mellon University, *Building from Strength. A New College for Carnegie-Mellon University*, Pittsburgh, Pa., 1967. ED 017 532 (63 pages, MF-$.65; HC-$3.29)

This document contains detailed curricular proposals for a new college in the humanities and social sciences. The college opened in September, 1969.

27. Grieder, Jerome B., *Freedom to Learn: A New Curriculum for Brown and Pembroke.* Brown University, Providence, R.I. July, 1969. ED 032 727 (9 pages, MF-$.65; HC-$3.29)

The final curriculum adopted at Brown following extensive curricular review. The new plan includes: exceptional freedom of student choice, modes of thought courses and university courses. The recommendations and the rationale behind them are included in "Interim Report and Recommendations" by the Special Committee on Educational Principles, Maeder, P.F. and others, ED 032 861, 54 pages, MF-$.65; HC-$3.29.

28. Homann, Frederick and others, "Proposal for a Revised Curriculum in the Day Division." Loyola College, Baltimore, Md., August, 1969, R.I.E. Feb. 1971. ED 043 303 MF-$.65, HC-$3.29

This document contains the rationale for proposing a 4-1-4 curriculum which was subsequently adopted. The proposal also outlines major programs, suggests unusual and traditional possibilities for using the four week "interim," and discusses problem areas and potential benefits of the 4-1-4 system. A discussion of the need to expand the American Studies program and the fine arts offerings is also included.

29. James Madison College, Michigan State University, *The James Madison College Student Handbook, 1969-1970.* East Lansing, Michigan, 1969, R.I.E., May, 1971. (HE 001 829) MF-$.65, HC-$6.58

This handbook lists the programs and policies of the college, and contains an extensive description of the curriculum which includes a policy problems approach to the social sciences, an annual writing requirement, and a field experience requirement.

30. Jakubowski, Ted and H. Roy Kaplan, *Seniors View the Core Curriculum: A Survey Report.* University of Massachusetts, October, 1968. ED 029 616, (23 pages, MF-$.65; HC-$3.29)

An institutional study demonstrating that the graduating seniors at the university generally considered the general education component of the curriculum to be worth little.

31. Muscatine, Charles and others, *Education at Berkeley, Report of the Select Committee on Education.* University of California Press, Berkeley, 1968.

The "Muscatine Report" arose following the disorders at Berkeley in 1964, and made recommendations for changes in teaching, admissions, counseling, grading, curriculum experimentation and requirements for the degree.

32. New College, *New College Student Handbook, 1969-1970.* Sarasota, Florida. ED 040 656. (39 pages, MF-$.65; HC-$3.29)

This student published Handbook for New College students includes a detailed description of the curricular options available to the students.

33. Patterson, Franklin and Charles R. Longsworth, *The Making of A College: Plans for a New Departure in Higher Education.* Hampshire College Working Paper, No. 1, December, 1966. Available from M.I.T. Press, $4.95.

This planning document for Hampshire College which opened in September 1970 includes detailed recommendations for the curriculum and rationale for the proposals.

34. Prausnitz, Walther G. and others, *Curricular Reform for Concordia College.* Concordia College, Moorhead, Minnesota, 1969. ED 035 377. (376 pages, MF-$.65; HC-$13.16)

An in-depth review of the curriculum at Concordia with corresponding recommendations on faculty recruitment, student body, grading, purposes of education, library, technology and other factors related to the curriculum.

35. Smith, Bradwell, and David Porter, "Carleton and Curricular Change." *Liberal Education*, December, 1968, pp. 546-59.

The authors describe the "variable-unit" credit system at Carleton College, Minnesota. They also discuss previous curriculums at Carleton, and their imperfections, the curricular options available at Carleton when the variable unit system was considered, and the reasons for rejecting the other alternatives.

36. Stanford University, *Study of Education at Stanford. Report to the University, Report #2, Undergraduate Education.* Stanford University, Stanford, Cal., Nov. 1968. ED 032 845. (112 pages; MF-$.65; HC not available from EDRS)

Report 2 of the *Study of Education at Stanford* focuses on the curriculum and related matters. It recommends substituting distribution requirements for the old general education requirements, and makes other recommendations concerning the calendar, grading, scheduling, new courses, and degree requirements.

37. Susman, Warren I., *The Reconstruction of an American College: Some Proposals for Rutgers College.* Rutgers University, New Brunswick, N.J. 1968. ED 025 992. (121 pages, MF-$.65; HC-$6.58)

Susman recommends the establishment of schools for entering freshmen, courses in place of credits, an exploratory semester of mini-courses, distribution requirements in place of the old general education program, new courses, changes in grading, and "comprehensive grading" in the major.

38. Swarthmore College, *Critique of a College*, Swarthmore, Pa., November, 1967.

These reports of the Commission on Educational Policy, the Special Committee on Library Policy, and the Special Committee on Student Life form a comprehensive description of undergraduate education at Swarthmore.

39. Tussman, Joseph, *Experiment at Berkeley*. Oxford University Press, New York, 1969.

A description of the history, structure, and philosophy of a totally prescribed, two-year program in general education operated experimentally at Berkeley from 1966 to 1970. Slightly different emphasis to the subject is given in Tussman's address edited by Terry–See bibliographic entry number 23.

Proposals for Reforming Curricula

40. Axelrod, Joseph, *Model Building for Undergraduate Colleges: A Theoretical Framework for Studying and Reforming the Curricular-Instructional Subsystem in American Colleges.* Center for Research and Development in Higher Education, Berkeley, Cal., 1969. ED 032 025. (321 pages, MF-$.65; HC-$13.16)

Axelrod maintains that curriculum content is related to grading, scheduling, freedom of students, etc., and that curriculum revision alone will fail if the other elements are not considered in the revision. Contains 4 models of curriculums that relate to students' needs, and an analysis of their differences from the standard curricular models. Portions of this work are also available in Axelrod, "Curricular Change: A Model for Analysis," Berkeley, 1968, (ED 030 355, 5 pages, MF-$.65; HC-$3.29); *Emerging Curriculum Models for the American College*, New Dimensions in Higher Education, Number 15, Durham, N.C., April, 1967, (ED 013 340–71 pages, MF-$.65; HC-$3.29); and *Search for Relevance*, Axelrod and Others, Jossey-Bass, San Francisco, 1969.

41. Bell, Daniel, *The Reforming of General Education: The Columbia College Experience in its National Setting.* Columbia University Press, N.Y. 1966.

Bell reviews the development of general education, and curricular developments at Columbia, Harvard, and Chicago. Maintaining that learning is sequential in the sciences, linked in the social sciences, and concentric in the humanities, he proposes a curriculum based on three elements: 1 year of general background information, 2 years of work with a discipline and its related subjects, and 1 year of integrative and seminar work–the "third tier."

42. Caws, Peter J., "Design for a University," *Daedalus*, Winter 1970, pp. 84-107.

Assuming some changes in high school and junior college programs, Caws suggests that students be allowed to enter universities only if they could demonstrate that they could benefit from the experience, and that they be allowed to continue on the same basis. Degrees would not be awarded, and transcripts would indicate only the work studied.

43. Gaff, Jerry G., and Associates, *The Cluster College.* Jossey-Bass, San Francisco, 1970.

This book is a general overview of the cluster concept at large universities. It describes the purposes and practices of these schools, and discusses the utility of the cluster concept, various methods of clustering, curriculum innovations, grading, etc.

44. Hodgkinson, Harold L., "Walden U.–A Working Paper." Center for Research and Development in Higher Education, University of California, Berkeley, December, 1968. ED 032 030 (Available from U.S. National Student Association, Washington, D.C. 1-10 copies free; over 10 copies, $.15 each).

The author appeals for the university to become an educational resource for the community rather than a restrictive institution for the elite.

45. Martin, Warren B., "The Case for Curriculum Options," *Educational Record*, Winter, 1970. pp. 14-21.

Martin urges institutions to allow various options to satisfy degree requirements and suggests four possible options.

46. Mayhew, Lewis B., *Contemporary College Students and the Curriculum.* SREB Research Monograph Number 14, Atlanta, Ga., 1969. ED 028 731 (91 pages; MF-$.65; HC-$3.29)

A general review of curricular problems. Mayhew discusses the curriculum in terms of students' needs and expectations, desire for self-knowledge, necessity of faculty relationships with students, rigidity of curriculum, and necessary changes.

47. Sheehan, Sister Helen, "The Library-College Idea: Trend of the Future?" *Library Trends*, July, 1969, pp. 93-102.

A review of the history of the Library-College concept, and the current view of the concept as espoused by its supporters.

48. Shores, Louis, "Library-College U.S.A.," *A.L.A. Bulletin*, December, 1969, 1547-1553.

Shores, the leading exponent of the library-college concept defines it and offers some possible applications.

49. _____. Robert Jordan and John Harvey, (eds.), *The Library-College* Drexel Press, Philadelphia, 1966.

A collection of essays on the library-college, and the proceedings of a workshop on the library-college held at Jamestown College in 1965.

50. Trow, Martin, "Admissions and the Crisis in American Higher Education." Background paper for the American Council on Education's 53rd Annual Meeting, October, 1970. Washington, D.C.: A.C.E., 1970).

The author maintains that as America moves from mass higher education to universal higher education, our colleges and universities must be restructured as consent units demanding different commitments, abilities, and educational experiences.

51. Yeo, Richard D., "A Look at College Clustering," *Journal of General Education*, January, 1970, pp. 291-298.

A description of the cluster college idea, and suggestions for other methods of clustering.